Investigating the English Language Needs of Hospital Medical Teams

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In this article, we extend our medical English materials development into the English language needs of hospital medical staff. While previous research had a focus on medical students in the early years of their studies, the new direction is towards trained professionals and students who are engaged in hospital activities. Often, professionals identify gaps in their own skills when they are actually working rather than when they are training. The current research focuses on identifying such gaps and providing support for working professionals that can also be used by students.

A key consideration in this article is how support in English can be provided to hospital staff, who spend the majority of their working time communicating in Japanese. In addition, professionals at hospitals are very busy, so both the development of materials and their provision in an efficient way are important. A further issue is that in the case of Hiroshima University, the medical campus is in a different city from its main campus, providing challenges in terms of moving equipment and time commitment relating to commuting for research and teaching. In the first part of this article, we describe the construction of a portable recording studio designed for images and sound that can be stored in or near a hospital. In addition, we outline the opportunities for providing English language resources online for staff, students, and patients through video and learning management systems.

In the final part of the article, we consider two hospital departments for investigation: gastroenterology and neurosurgery, building on one author's experience of colonoscopy and polypectomy for the former, and using interviews with a surgeon to explore the latter. By examining two specialisms, we also explore communication that is shared across departments, such as in-patient instructions.

BACKGROUND

Our previous research on medical English has been oriented towards the provision of courses and materials to third-year students. Working with our medical school's English instructor, we have constructed a fourteen-unit syllabus that is structured around body systems and their related medical specialisms. The design of the materials follows what we term a *quasi-parallel syllabus*, one which draws on what the students have covered in their medical studies but goes slightly beyond it, based on learnability (Fraser & Davies, 2022a). Over the years we have documented its development in several articles (Davies et al., 2019, 2020; Enokida et al., 2018; Fraser et al., 2015; Fraser & Davies, 2022b). The advantage of designing and developing English language materials at this stage of medical studies is that students are not specializing but receiving a broad medical education. Because of this, a syllabus and materials can be designed on the basis of body systems and include a large number of technical terms with broad applications within the medical field.

However, it limits the focus on staff-patient interaction within the syllabus, which is the main aim of the new research.

In addition to developing a syllabus and materials, our research team has explored different ways of delivering the course. An innovation in 2017 was the creation of a flipped-learning approach (Enokida et al., 2018) for seven units of material that involved a learning management system (LMS), Blackboard Learn 9.1 (hereafter, Bb9), in which self-study was combined with classroom-based courses. With the disruption caused by the COVID-19 pandemic, Bb9 became much more important, with most of the syllabus being delivered through materials and tasks that were accessible online. In addition, the traditional classroom was replaced by videoconferencing sessions on Zoom. As more and more materials were placed online, a further innovation was to add links to YouTube videos that provided important visual information in addition to audio in English.

PROJECT AIMS

In the new research, our focus is on staff–patient interaction in a hospital, developing English language materials that closely reflect the way in which health care is delivered. To achieve this, it is important to first carefully consider the overall situation that we are researching, and then be able to make recordings at or near hospitals, with the focus being on presenting key content through video, around which tasks can be built. It is also necessary to examine how video and materials can be made available both to medical staff and students involved in medicine. To this end, we use our SiReN approach, outlined in Fraser and Davies (2022a), examining the situation, resources, and needs in relation to the project. This approach builds on prior ideas for needs analysis in English for Specific Purposes (Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987).

SITUATION

English for Medical Purposes is an umbrella term that covers a wide range of medical situations across the world. A key distinction is between countries where English is the official or primary language and countries where it is a second language. In the first case, a researcher can seek to record and identify salient English that is used in the process of communication in a hospital. This research can then be used as a basis for developing materials for students who wish to work in an English-speaking environment. In the case of Japan, where the primary language is Japanese, a researcher has slightly different aims. These are to identify situations where it may be important for staff to use English, either for medical research or for dealing with patients. In the former situation, we have explored the technical terms used between professionals (Fraser et al., 2015; Fraser & Davies, 2022) and the features of case reports written in English (Davies et al., 2022; Fraser et al., 2021).

Regarding interaction with patients in Japanese hospitals, a researcher's aim is to identify English language communication needs for staff and create learning opportunities that address those needs. This may involve the construction of the necessary English for particular hospital situations rather than the more mimetic approach of simulating English from the actual English used in countries such as the United States and Australia. In the Japanese situation, interaction in English may be used for first-language speakers, but it is more likely that most cases involve the use of English as a Lingua Franca, in which neither interlocutor

is using English as a first language. In this respect, the design of materials such as video will involve the creation of what Widdowson (1978) describes as simple texts, constructed by using basic grammar and vocabulary to maximize comprehensibility.

RESOURCES FOR MATERIALS DEVELOPMENT

Here, we discuss technological resources and our strategy for this aspect of the project. In particular, we consider the requirements for making high-quality video with accurate content, and the construction of equipment that enables us to achieve this aim. We also discuss how such video can be made accessible.

Medical English Video

With modern medicine's scientific base, medical English should be clear, precise, and as unambiguous as possible. In pursuing this aim, video has great potential, but as Maynard (2021) observes:

> Sadly, effective public communication as a social good remains under resourced in many academic institutions and one consequence of this is that academics who take such a role seriously often need to resort to modes of communication that they can squeeze through the cracks in a profession that is extremely demanding of their time and attention. (p. 2)

In our case, as applied linguists, it is important to make accurate audio and combine this with clear visual support in the video. The safest way to do this is to create scripts that can be checked by medical professionals and then used by the research team for making clear and concise videos. From a pedagogical perspective, short videos of five minutes or less are preferable, reflecting Rahman et al.'s (2021) microlearning approach, which is based on Jomah et al.'s (2016) work. In this approach, short targeted segments are used.

As the most common use of the videos will be self-study, a point to consider is the creation of an aesthetic that matches more commercially created video on YouTube in terms of picture quality and audio. West et al. (2020) argue that:

> Quality visual design piques interest, calls attention, and increases engagement and motivation while simultaneously improving communication, supporting cognitive processing of complex ideas, aiding retention, and fostering creativity. (p. 2)

Consequently, although the video is for specific and non-commercial purposes, the creation of an aesthetic that matches more commercial video may help its users to maintain their concentration and focus; analyzing metrics that provide insight into viewership can aid in developing quality video.

Construction of a Mobile Filming Studio

As noted above, our research team members face the challenge of having their offices in a different city to the university's medical hospital. In addition, it is important to have the option of moving cameras and recording devices quickly into areas of a hospital in order to video medical equipment, and subsequently moving them to a quiet location for organizing video clips. To address these challenges, the research team

has constructed a mobile filming studio. The trolley has been designed for ease of use to create high-quality video through the inclusion of several carefully considered features (Table 1).

TABLE 1. Features of the Portable Studio

1. All the equipment is integrated into a trolley for mobility.
2. The trolley table is electronically height adjustable.
3. A camera has been attached to the trolley table.
4. Professional-grade lights and a microphone have been mounted on aluminum extrusions that are attached to the trolley table.
5. An audio compressor has been added to filter out unwanted noise and frequencies.
6. Using an iPad, a simple teleprompter has been added to the trolley table.

The combination of these features creates a portable, easily adjustable recording studio in which the lighting and camera can be changed to suit the circumstances. A very important feature is a simple teleprompter. To ensure accuracy, scripts can be created by applied linguists and then checked by medical staff. For the creation of the audio, the use of the script via a teleprompter aids the speaker in delivering it accurately and concisely.

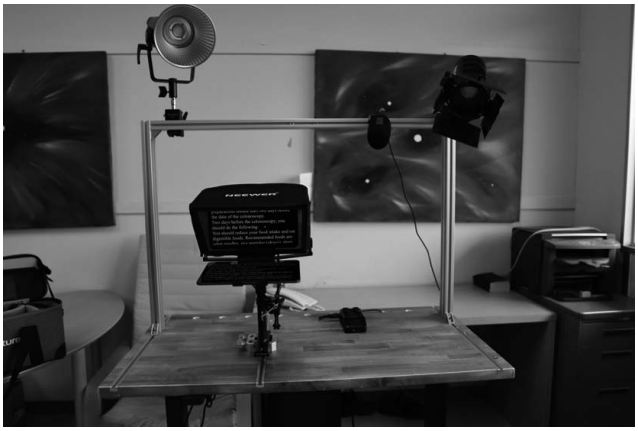

FIGURE 1. Photograph of the Portable Studio

Video Delivery, Organization, and Courses

The research team has to consider how materials can be made accessible and used in aiding staff and students. Development in course delivery prior to and during the COVID-19 pandemic offers an insight into a range of options: regular classroom-based, intensive classroom-based, videoconferencing-based, self-study, or flipped. We consider the strengths and weaknesses of these in relation to the needs of professional staff.

Prior to COVID, the most common form of delivery was classroom-based, with students attending classes at a particular time of the week. While this works well for students who are committed full-time to learning, it provides challenges for professional staff, who may have to deal with changes in schedule and emergencies that prevent them from attending such classes.

A different option used for several years by the research team in teaching medical students was to create a fully classroom-based intensive course over a period of days. This has the advantage of being able to place a course in a period that is less busy for the participants. Its disadvantage is that, in the case of illness or emergency, participants may miss most of a course.

With the start of the COVID pandemic, an alternative to classroom-based teaching was teaching through videoconferencing. This maintains the same structure as classroom-based teaching but allows participants to join from different locations. Although lacking the communal feel of a classroom-based course, research within the Institute for Foreign Language Research and Education (Selwood & Nykytchenko, 2022) indicates that it is popular with Japanese students. However, the challenge of a videoconferencing-only course is the same as a classroom-only course – busy staff may not have the time to attend it.

Self-study also emerged as an option at the beginning of the COVID pandemic, where teachers used an LMS to provide content and tasks for students to study regularly. While having the advantage of great flexibility, this form of delivery suffers from the problem that students have very little contact with teachers. While having strengths from a receptive skills perspective, the interaction between the participants in the course and the teacher is limited or non-existent.

As the COVID pandemic progressed, a flipped-learning model of course provision emerged, in which students prepared for taught videoconferencing components by studying content and undertaking tasks via an LMS. This approach combines the advantages of self-study with the personal contact that taught classes provide. Members of the research team used the flipped-learning approach with third-year medical students, combining it with a classroom-based intensive course prior to the pandemic and a videoconferencing intensive course during the pandemic.

Provision for Professionals

In relation to the provision of learning materials for professionals, a number of factors have to be considered. While most courses provided by university teachers fit into an established curriculum, involving the acquisition of credits for fulfilling degree requirements, the learning environment for professionals constitutes what may be described as the voluntary side of learning. Consequently, the materials need to be flexible and accessible. As Anthony (2018) notes, materials can be organized via an LMS or on a specially created website. At this planning stage of our project, the most viable option is to create video that is uploaded online. Videos can be organized by using links on the university's LMS (from 2023, Moodle), and supplemented by supporting PDFs and tasks. Where possible, this material can be combined with short intensive workshops that allow professionals to talk about what they have studied.

RESEARCHING NEEDS WITHIN SPECIALISMS

In this section, we consider two hospital departments as areas of focus for the development of the video: gastroenterology and neurosurgery. These have been selected opportunistically through already existing contacts with the departments. At this planning stage of the project, a focus on processes and procedures helps the research team to identify shared areas between treatment in different fields, as well as to focus on areas that are specific to each specialism.

Gastroenterology

Gastroenterology has been selected for two reasons: one is opportunistic through one of the research team member's experiences of treatment; the other is practical in that a number of procedures require the patient to make preparations with the assistance of nurses and often undergo a procedure while conscious. Here, we focus on an instance of this, polypectomy, in which small tumors (polyps) are removed from the large intestine. Part of the process is colonoscopy, the inspection of the large intestine via a camera. It is necessary for the medical teams involved to instruct the patient prior to and during the colon inspection.

In Table 2, we list the broad steps involved in a colonoscopy in which a polypectomy is recommended. Of these seven steps, doctors are involved in three (1, 5, 6), and nurses are involved in five (2, 3, 4, 5, 7).

TABLE 2. Steps Involved in Colonoscopy (Polypectomy Scheduled)

1. A patient visits the hospital with a concern about her/his bowels. As a precaution, the doctor suggests a colonoscopy (visual inspection of the bowel), which the patient agrees to. A day is arranged.
2. The patient is sent for a blood test, provision of laxatives, and instruction on when to take them and what to eat the day before the colonoscopy.
3. On the day of the colonoscopy, the patient fills out a medical questionnaire and is instructed by nurses on how to take laxatives and the process for checking the clearness of her/his evacuations. The patient then takes the laxatives and evacuates her/his bowels several times during the process.
4. The patient changes into special clothing for the colonoscopy.
5. The patient is given a colonoscopy by a doctor and a nurse.
6. After the colonoscopy, a doctor discusses the results with the patient. Polyps of a certain size are found, so the doctor recommends a polypectomy. A day is arranged involving an overnight stay at the hospital.
7. The patient is instructed by a nurse on what to bring to the hospital and issued with laxatives and instructions on how to take them.

Doctors

In the case of doctors, in step 1, it is necessary to take a history, examine the patient, explain what a colonoscopy is, why it is advisable, and if the patient agrees to a colonoscopy, to organize the day of the check. In step 4, the colonoscopy itself, the doctor needs to check whether the patient wants an anesthetic and instruct the patient on which positions to take during the examination of the colon. In step 6, the results are discussed with the patient, so the doctor needs to explain the photographs of the colon and why a polypectomy is advisable.

Nurses

In the case of colonoscopy, nurses' involvement is substantial. Once the main decisions have been made, nurses are involved in instructing the patients in the standard processes involved. For example, in step 2, a nurse must explain how to take laxatives and what to eat in the days prior to the colonoscopy. Similarly, in steps 3 and 4, nurses are involved in instructing and overseeing patients at the hospital, making sure that they clear their bowels and showing them where to change and the medical clothes they need to wear. A nurse will also assist a doctor during the colon examination itself in step 5.

Neurosurgery

As with gastroenterology, we examine an example of a medical problem and consider the communication between the staff and the patient. In previous research, we have documented some of the key procedures in neurosurgery (Fraser et al., 2018), and for this article, we have chosen the treatment of cerebral aneurysms, which are described by Marsh (2014) as follows:

> Aneurysms are small, balloon-like blow-outs on the cerebral arteries that can – and often do – cause catastrophic haemorrhages in the brain. (p. 13)

If a neurosurgeon discovers an aneurysm in a patient's brain, he/she must consider its size, location, and risk of rupture, taking into account factors such as the patient's age before advising on a course of action. In this article, we consider the communication involved in the case of surgery. As Marsh notes, there are two different surgical approaches: clipping and coiling. With clipping, "the aim of the operation is to place a minute spring-loaded metal clip across the neck of the aneurysm – just a few millimetres across – to prevent the aneurysm bursting" (p. 13). With coiling, "a catheter and wire is passed through a needle in the patient's groin into the femoral artery and fed up into the aneurysm … and the aneurysm is blocked off from inside rather than clipped off from the outside" (p. 15). In Japan, coiling is mainly performed by neurosurgeons. In Table 3, we examine clipping surgery.

TABLE 3. Steps in Treatment of an Aneurysm Through Clipping Surgery

1. A patient visits the hospital with a concern about her/his head. As a precaution, the doctor suggests a scan. The patient agrees.
2. The patient is sent for an MRI (magnetic resonance imaging) scan.
3. After the scan, the surgeon discusses the results with the patient, explaining the discovery of an aneurysm and advising clipping surgery. The patient agrees. The surgeon schedules two periods that the patient will stay in the hospital, including the day of the surgery.
4. The patient is instructed by a nurse on what to bring and do on the day he/she enters the hospital.
5. The patient enters the hospital as an in-patient for a three-day period and is sent for cerebral angiography (a procedure that uses a dye and X-rays to check how blood flows through the brain).
6. The patient enters the hospital for a fourteen-day period. Three days before the surgery, the doctor talks about the clipping procedure with the patient in detail (30 to 60 minutes).
7. The patient is visited by the scheduled anesthesiologist, who talks about anesthetics.
8. On the day of surgery, the surgeon visits the patient to reassure him/her and help alleviate stress.
9. A surgical nurse goes to the ward and talks to the patient, reassuring him/her and checking to see if any areas of the body will need special care when positioning the patient for surgery, then taking the patient to the operating theater.
10. The surgery is performed.
11. The patient is placed in the ICU.
12. When the patient has recovered from the anesthetic, the surgeon visits the ICU and checks the patient's condition, looking for any signs of paralysis or impairment.

Neurosurgeon

With this procedure, the neurosurgeon's role in the diagnostic stages is similar to the gastroenterologist's – taking a history, advising the patient, and discussing results (steps 1, 3). In contrast to the polypectomy, the surgeon's interaction with the patient is much more extensive in the preparation for the surgery: explaining the surgery to the patient prior to the operation (step 6) and reassuring the patient (step 8). Unlike a polypectomy, the patient is under full anesthetic during the operation (step 10). The anesthesiologist also communicates with the patient (step 7).

Nurses

In the case of clipping surgery, nurses are involved in explaining what to bring to the hospital (step 4), and collecting the patient for surgery (step 8), as well as care for the patient in the ward (step 5, 6) and the ICU (step 11).

ANALYSIS

In this section, we use our documenting of colonoscopy and clipping of an aneurysm to explore potential areas for the creation of video and materials. We consider the interactions and areas of the hospital that are shared between specialisms and those that are particular to a specialism. A further consideration is how language forms part of human action. Particularly with instructions, communication may be non-verbal, either through gestures or through physical touch to move patients into a variety of positions. One of the advantages of video is that language can be linked to pictures, incorporating such non-verbal communication.

From the documenting of polypectomy and clipping, one key aspect is the giving of instructions. This is particularly evident in the case of talking to patients about preparations for a hospital stay. The responsibility is usually that of nurses, who when dealing with a patient that speaks Japanese, will go through some paper sheets of instructions. In the specific field of gastroenterology, a nurse must explain how to take laxatives prior to visiting a hospital for a colonoscopy or polypectomy. This is usually done in Japanese with the aid of an instruction sheet. In both these cases, instructions are given to a patient so that she/he can fulfil the tasks by herself/himself. In other cases, instructions are given to a patient during a process and procedure. For example, during colonoscopy or during a scan, medical staff may need the patient to move position. In these cases, they may communicate by touch, physically moving a patient's limbs into a correct position, but it may help to also verbally instruct the patient, examples being "Please roll onto your left side" and "Please roll onto your back, raise your left knee, and place your right ankle on your left knee."

In cases of instruction, video can be made that produces the instructions a member of the medical staff needs to give. As an example, we have created a short script through a process of translating a Japanese handout used in a hospital and then writing it in the clearest English that we can (see Appendix 1). The video can be used as a practice example for medical staff, so that they can read the text to patients when giving instructions. This also raises the issue of creating instructional PDFs in relation to videos. Nurses, in particular, need to make sure that patients understand what they need to do, which means going through instructions and helping with problems in comprehension. A well-made video could also facilitate communication, used by medical staff during the instruction process, sitting with the patient while it is

played and then helping with any questions that the patient has.

Doctor-patient interaction contains an element of discussion and decision-making. A doctor needs to be able to describe a problem, suggest a course of treatment, and help the patient come to a decision. In relation to video, in the case of neurosurgery, simple English can be used to describe medical problems such as aneurysms, subdural hematomas, and subarachnoid hemorrhages, and their treatment. In the case of gastroenterology, the same approach can be taken with problems such as polyps, appendicitis, and gallstones. This would allow staff to become familiar with descriptions of problems and treatments.

IMPLICATIONS

Three implications emerge from the analysis relating to the following themes: communication through written and spoken media, general hospital procedures versus specific specialist procedures, and instructional video versus descriptive video.

One important insight is that in many cases communication is through both spoken and written media. Where there is a standard procedure involved, often in the case of nurses' responsibilities, hospital staff usually explain information that is passed to a patient on a sheet of paper. The challenge in Japan is that most written information is in Japanese, creating a hurdle for busy staff who have to code-switch into English while referring to a document written in Japanese. An initial strategy should be to gather key documents relating to a particular procedure and translate them into simple and concise English. Most sets of instructions, such as those for taking laxatives, are relatively short and would fit with Rahman et al.'s (2021) idea of highly targeted video segments. These instructions can be supplemented with other texts that illustrate the steps involved in a process or procedure. In this way, texts can be built and organized before conversion into video.

In documenting procedures, a distinction emerges between shared hospital areas such as in-patient care and scans in contrast to specialist areas such as colonoscopy, which is particular to the gastroenterology department. The advantage of creating short, highly targeted segments of video is that videos on shared areas can be slotted into different sequences of video segments. For example, the same video on in-patient care can be shared between polypectomy and clipping or used by itself, depending on the needs of its users. The strategy envisaged here is that through the mapping of particular procedures into a set of steps, the shared areas of the hospital will become apparent.

Finally, a distinction can be made between what we term "instructional video," essentially simulating the instructions that a member of the medical staff can use, and video that is descriptive, documenting processes. In the latter case, it is more likely that parts of it will be paraphrased in discussions with patients, but not used verbatim. Both types of video could have dual use, both as pedagogic material for staff and as informational material for patients.

CONCLUSION

In this article, we have described the opportunities for developing English language materials that address the needs of hospital staff who occasionally have to communicate with patients through English, noting that the approach to the materials should be one of using English as a Lingua Franca. We have documented the creation of a mobile recording studio, which gives our research team the ability to operate

close to and in a hospital to make video recordings that can visually support spoken pre-prepared texts. We have identified the collection and organization of existing documents as an an important part of the research. In the case of colonoscopy, although nurses are responsible for instructing patients, the range of instructions that a patient receives will come from nurses with different responsibilities in different physical locations. The research is oriented towards tracing the steps involved in a specific form of treatment.

A final point is that, in the case of Japan, the main language of communication running through a hospital is Japanese. English language resources need to be developed that assist medical staff in communicating with patients from many different countries. The challenge is to produce audiovisual and written materials that deliver key information and instructions in a simple direct English. In this respect, an applied linguistics team combined with flexible recording equipment can aid in communication within a hospital. It is to this aim that the research is oriented.

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APPENDIX 1. Extract of an Example Video Script

Diet and Laxatives When Preparing For a Colonoscopy

To prepare for a colonoscopy you need to empty your large intestine. Your preparations should start two days before the date of the colonoscopy.

Two days before the colonoscopy, you should do the following:

You should reduce your food intake and eat digestible foods. Recommended foods are udon noodles, rice porridge (okayu), plain bread, white fish, tofu, boiled or poached eggs, bananas, and apple slices without the skin.

Do not eat foods that that are difficult to digest. Examples are (1) high fiber foods such as vegetables, mushrooms, black beans, nuts, and seaweed, (2) fried foods, and (3) fruit containing seeds such as strawberries and kiwi fruit.

One day before the colonoscopy you should do the following:

Eat a small amount of digestible food for each meal. Do not eat anything after 9:00 pm. You can drink water or green tea. Do not drink milk, dairy products, pulped juices, or alcohol.

IF YOU ARE TAKING MEDICATION REGULARLY, YOU SHOULD TAKE THIS AS USUAL.

After lunch, pour two hundred milliliters of water into a glass. Open the small plastic bottle of sodium picosulfate and add 30 drops to the glass, then drink the solution.

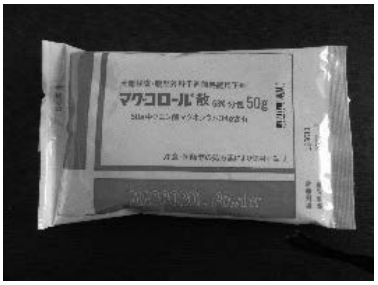
IF YOU DO NOT HAVE KIDNEY PROBLEMS: After dinner, pour three hundred milliliters of water into a glass. Squeeze the rest of the sodium picosulfate from the bottle into the water. open the packet of Magcorol powder, and add it to the same water, stir the solution, then drink it.

IF YOU SUFFER FROM KIDNEY PROBLEMS: After dinner, pour three hundred milliliters of water into a glass. Squeeze the rest of the sodium picosulfate from the bottle into the water, stir the solution, then drink it. DO NOT USE THE PACKET OF MAGCOROL POWDER.

Keep a record of how many times you go to the toilet (defecate) during the night. …

Visuals

Picosulfate



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ABSTRACT

Investigating the English Language Needs of Hospital Medical Teams

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This paper describes the preliminary research and equipment design for a project to develop materials that aid professional staff to communicate in English at a Japanese hospital. A key aim is to make and organize videos in English supported by pedagogic tasks. In the paper, a situation, resource, and needs (SiReN) analysis is used, with a focus on technological resources and the English language needs of teams in hospitals.

In terms of the situation under study, the authors discuss the difference between the use of English in hospitals where the primary language of communication is English in contrast to hospitals in Japan, in which English is used as a Lingua Franca.

Regarding resources, the research team has built a mobile recording studio which can be used both in or near a hospital. It has been designed for high-quality audio and video recording, and it includes a simple teleprompter to aid in the reading of scripts. In addition, consideration is given to how materials can be organized on a learning management system that can be made available to staff.

In relation to needs, two hospital departments, gastroenterology and neurosurgery, are used to examine some of their communicative needs in English, and two treatments are described: polypectomy (the removal of small tumors from the colon) and the clipping of a cerebral aneurysm (a balloon-like weakness in the wall of a blood vessel in the brain). In the analysis that follows, several implications emerge: By researching a small number of departments, a variety of communicative needs in shared hospital areas can be included, such as in-patient care and scanning; two types of videos can be made, with one type describing processes and procedures, and the other providing verbatim instructions; hospital documents for patients can be collected and translated, then used as the basis for video scripts.

要　約

病院医療チームの英語ニーズに関する調査

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本論文は，日本の病院において英語でコミュニケーションを行う専門スタッフ用の教材開発研究プロジェクトに関して，その予備調査および教材設計を報告するものである。主な目的は，教育学におけるタスクによって支援される英語動画を作成し，配信を行うことである。本研究は，病院内の技術的リソースとチームの英語に対するニーズに焦点を当てながら，状況・リソース・ニーズ（SiReN）分析（a situation, resource and needs（SiReN））を用いている。

状況：コミュニケーションの主要言語が英語である病院と，リンガ・フランカとして英語を使用する日本の病院との英語使用の違いを考察する。

リソース：研究チームは病院内を持ち運ぶことが可能なレコーディング・スタジオ（a mobile recording studio）を作成した。それは高音質で高画質なレコーディング（recording）が可能となるように設計されており，スクリプトを読むことを支援する簡単なテレプロンプターも備えている。さらに，スタッフが利用する学習管理システム上でどのように教材を構成するかについても十分に考慮されている。

ニーズ：英語のコミュニケーション・ニーズを調査するために，病院の 2 つの診察科（消化器科と神経外科）において，ポリペクトミー（結腸の小さな腫瘍の切除）と，脳動脈瘤（脳の血管壁にできた風船状の欠陥）のクリッピングという 2 つの治療法の説明を行った。分析の結果，いくつかの診察科を調査することで，次の 3 つの示唆が得られた。(1) 入院患者のケアやスキャニングなど，病院の共有エリアにおける様々なコミュニケーション・ニーズを含めることが可能となる。(2) プロセスや手順を説明する動画と逐語的な指示を示す動画の 2 種類を作成できる。(3) 病院における患者向けの書類を収集・翻訳し，それを基に動画のスクリプトを作成できる。